

Module Specification

Module Summary Information

1	Module Title	Biomechanics of Human Movement
2	Module Credits	20
3	Module Level	4
4	Module Code	SPX4003

5	Module Overview
<p>To work within many sport, exercise and health related roles it is imperative to have an excellent understanding of human movement. The primary purpose of this module is to introduce the mechanical principles that govern human movement and thus equip students not only with the ability to observe and measure human movement (i.e. to describe movement), but also to begin to understand the mechanisms by which human movement is controlled and effected (i.e. to explore why we move the way that we do). The module covers basic concepts, variables and parameters associated with linear and angular kinematics and kinetics of human movement and its scope ranges from governing mechanics through to general and specific application within sport, exercise and health.</p> <p>Delivery is based upon governing mechanics, current applied and evidence-based literature, and the professional experiences of the expert academic staff and guests. Contact sessions with staff will take place in conventional teaching environments for general lectures, as well as within state-of-the-art laboratory facilities where students will gain hands on experience of working with advanced technologies such as motion capture, force instrumentation, and electromyography systems. Additional learning resources are provided online in the form of both directed and unguided reading and training, and students will also be provided with technology enhanced training to become proficient with selected specialist software.</p> <p>The module also has a strong focus on providing opportunities for students to enhance various fundamental and academic key skills such as numeracy, literature searching, referencing, report writing, independent study skills, working in small teams, and planning and time management.</p>	

6	Indicative Content
<ol style="list-style-type: none"> 1. What is Biomechanics? 2. Strategic approach to qualitative and quantitative biomechanical analysis 3. Describing the way humans move 4. Exploring why humans move the way they do 5. Force 6. Linear and Angular Kinematics 7. Linear and Angular Kinetics 8. Work, Energy and Power 9. Using specialist equipment and technology 	

7	Module Learning Outcomes	
	On successful completion of the module, students will be able to:	
	1	Through the engagement with learning resources, demonstrate knowledge and understanding in kinesiology
	2	State, explain and interpret biomechanical principles
	3	Undertake a biomechanical assessment of human movement

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1, 2, 3	X		

9	Breakdown Learning and Teaching Activities	
Learning Activities	Hours	
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable	38	
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE	70	
Private Study (PS) includes preparation for exams	92	
Total Study Hours:	200	